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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,865	12/01/2003	Yu-Nung Shen	SIPT122078	2782
26389	7590	07/13/2005	EXAMINER	
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347			TRAN, THANH Y	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/725,865

Applicant(s)

SHEN, YU-NUNG

Examiner

Thanh Y. Tran

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) 12-49 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6 is/are rejected.
7) ☒ Claim(s) 7-11 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Akram et al (U.S. 6,891,248).

As to claim 1, Akram et al discloses in figures 1A-1C, and 4E-4F a semiconductor package comprising: a semiconductor die (12) having a pad-mounting surface, and a plurality of spaced apart bonding pads ("die contact" 16) formed on the pad-mounting surface; a plurality of conductive bodies (44, 40Vss, 42Vcc), each of which has a trace part (a trace part is an outer part of trace 44 or 40Vss or 42Vcc) that is formed on the pad-mounting surface and that is offset from a respective one of the bonding pads (16) in a lateral direction relative to the pad-mounting surface, and a pad-connecting part (a pad-connecting part is a part of trace 44 or 40Vss or 42Vcc that is connected to contact 16 as shown in figure 1C) that extends from the trace part to connect electrically with the respective one of the bonding pads (16); a dielectric protective layer (28) formed on the pad-mounting surface and the conductive bodies (44, 40Vss, 42Vcc) and formed with a plurality of bump-through-holes (26), each of which exposes a portion of the trace part of a respective one of the conductive bodies (44, 40Vss, 42Vcc), and a plurality of solder bumps (contacts 14Vcc), each of which fills a respective one of the bump-through-holes (26) to connect

Art Unit: 2822

electrically with the portion of the trace part of a respective one of the conductive bodies (44, 40Vss, 42Vcc) and each (14Vcc) of which protrudes outwardly from the protective layer (28).

As to claim 2, Akram et al discloses in figures 1A-1C, and 4E-4F a semiconductor package further comprising: a plurality of metal plating layers ("conductors" 22) (see col. 4, lines 7-10), each of which is formed on a respective one of the bonding pads (16), the pad-connecting part (a pad-connecting part is a part of trace 44 or 40Vss or 42Vcc that is connected to contact 16 as shown in figure 1C) of each of the conductive bodies (44, 40Vss, 42Vcc) being formed on a respective one of the metal plating layers ("conductors" 22) (see col. 4, lines 7-10).

As to claim 3, Akram et al discloses in figures 1A-1C, and 4E-4F a semiconductor package, wherein each of the conductive bodies (44, 40Vss, 42Vcc) is made from conductive paste (since conductors 44, 40Vss and 42Vcc are conductive, they are considered to be made from conductive material or conductive paste).

As to claim 5, Akram et al discloses in figures 1A-1C, and 4E-4F a semiconductor package, wherein the trace part of each of the conductive bodies (44, 40Vss, 42Vcc) includes a metal layer ("under bump metallization layer" 30) that is electrically connected to a respective one of the solder bumps (14Vcc).

As to claim 6, Akram et al discloses in figures 1A-1C, and 4E-4F a semiconductor package, wherein the metal layer ("under bump metallization layer" 30) includes a nickel sub-layer and a gold sub-layer ("nickel" and "gold" material layers) (see col. 8, lines 12-22).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2822

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al (U.S. 6,891,248) in view of Sugahara (U.S. 5,933,169).

As to claim 4, Akram et al does not disclose the protective layer is made from epoxy resin.

Sugahara (U.S. 5,933,169) teaches a protective layer is made from epoxy resin (see col. 3, lines 28-33). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the semiconductor package of Akram et al by using epoxy resin for a protective layer as taught by Sugahara for preventing contact and breaking of conductor wires and preventing corrosion due to moisture or dust particles in the air (see col. 3, lines 28-33 in Sugahara).

Allowable Subject Matter

5. Claims 7-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ding et al (U.S. 6,701,614), Lin (U.S. 6,660,626), Eichelberger et al (U.S. 6,426,545) and Eichelberger et al (U.S. 2003/0201534) disclose relevant prior art to the invention.

Art Unit: 2822

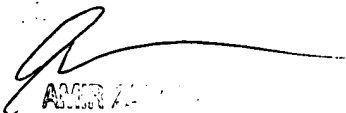
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (571) 272-2110. The examiner can normally be reached on M-F (9-6:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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